

Glenn Research Center, Occupational Health Programs Manual

Chapter 18 – AUTOMATED EXTERNAL DEFIBRILLATORS (AED) PROGRAM

NOTE: The current version of this chapter is maintained and approved by the Safety, Health and Environmental Division (**SHED**). The last revision date of this chapter was March 2007. The current version is located on the Glenn Research Center intranet at <http://smad-ext.grc.nasa.gov/emo/pub/ohpm/ohpm-manual.pdf>. Approved by: Occupational Health Branch Chief, Gayle Reid

PURPOSE

Coronary heart disease is the leading cause of death in the United States. The American Heart Association estimates that 250,000 Americans die each year from sudden cardiac death as a result of coronary heart disease. The Occupational Health Branch (OHB) within the Safety Health and Environmental Division (SHED) supports the use of Automatic External Defibrillators (AED's) at the John H. Glenn Research Center and Plum Brook Station in order to provide a timely response to victims of sudden cardiac arrest caused by ventricular fibrillation. Ventricular fibrillation is a treatable condition and potentially survivable when immediate treatment is provided. The purpose and goal of this program is to provide a timely emergency response and treatment for sudden cardiac arrest while ensuring the rapid transfer of the individual into the community EMS. The ability to respond quickly not only increases the potential survival for the individual, it provides the opportunity for the best possible medical outcome.

APPLICATBILITY

All Medical, Safety and Security staff will be trained in CPR, first aid, and AED use. Additional training for other interested employees may be arranged. This training will be done by a certified instructor and coordinated through the AED Program Coordinator and the training office.

DEFINITIONS

Automated External Defibrillator (AED):

A device used to assist in the attempt to save the life of someone in sudden cardiac arrest.

Cardiopulmonary Resuscitation:

Cardiopulmonary Resuscitation (CPR) consists of mouth-to-mouth respiration and chest compression. CPR allows oxygenated blood to circulate to vital organs such as the brain and heart. CPR can keep a person alive in the short term until more advanced procedures (such as defibrillation) can be started.

POLICY

- Memorandums of Understanding (MOU) with local communities
- AED Policy
- AED Procedures
- Medical protocols related to AED usage

RESPONSIBILITIES

Center Medical Director

The Medical Director of the Center OHP facility should be designated as the AED Program Director. The Director, under the auspices of the Occupational Health Coordinator (OHC), has been given certain responsibilities in keeping with the statement of work for the Medical Services contract.

Program responsibilities include the following:

1. Maintain a database to track all equipment and maintenance of AED's.
2. Maintain a database of employees who have been trained in the use of AED's and update the database on a monthly basis.
3. Review the AED policy on a regular basis and make recommendations to reflect programmatic changes.
4. Ensure compliance with the Program's processes and protocols.

AED Program Coordinator

The Chief, Occupational Health Branch shall designate an AED Program Coordinator to coordinate activities and provide operational oversight of the Program and to ensure that routine AED checks occur. This center through the Chief, Occupational Health Branch has assigned this responsibility to the (OHC) to minimize contract cost for this program and to establish a governmental link between the GRC First Responders who are assigned to SHED and the COTR of the contractor security force who reside in another organization. These duties include but are not limited to the following:

- Maintaining written AED processes and protocols, develops, reviews and updates procedures related to the use of AED's.
- Integrating the Program into the community Emergency Medical Services (EMS) by coordinating MOU's with local EMS regarding GRC AED procedures.
- Maintaining equipment according to the manufacturers recommendations (except in GRC Medical Services and the Fitness Center)
- Maintaining adequate inventory of supplies and developing a process to ensure that proper levels of supplies are available at all times.
- Creating and maintaining a list of trained responders.
- Coordinating training programs, drills, and post incident briefings.
- Maintaining current training records as part of the Center's Business Management System process.
- Ensuring appropriate written documentation is completed after an incident.
- Maintaining a record of equipment malfunction incidents.

Safety Branch

The Chief of the Safety Branch will assign a member of the First Responders to perform weekly and monthly, documented maintenance checks on all AED's not assigned to other organizations. A similar arrangement will be made for the AED's assigned to Plum Brook Station.

Security Management & Safeguards Office (SMSO)

The Chief of the Security Branch will ensure that weekly and monthly documented maintenance checks of the AED's located in the security vehicles are performed. This policy also applies to the AED's contained in the mobile unit of Plant Protection at Plum Brook Station.

Supervisors

The Supervisors at Lewis Field and Plum Brook Station will:

- Support the implementation of the AED policy at their respective locations.
- Support employees that are involved in the AED program.
- Report equipment malfunctions to the Occupational Health Branch.

Employees

The employees at GRC and Plum Brook Station will:

- Coordinate participation in the AED Program with their supervisor
- Participate in all required training and events as required in this policy to include drills and following the established processes and protocols.

REQUIREMENTS

AED Program Response Teams

AED users are responsible for completing the designated training, participating in drills, and following the established process and protocols.

Eligibility

Personnel recommended as team members to support the AED Program are physicians, nurses, fitness center staff, emergency medical technicians, and first responders. All other potential team members must first seek approval from his/her supervisor prior to assignment and training.

Training Requirements for Team Members

All team members are required to successfully complete AED and Basic Life Support or CPR training. The two recommended training courses are offered through the American Heart Association (AHA) and the American Red Cross. The AHA offers both Heartsaver AED and Basic Life Support courses. The American Red Cross offers a CPR/AED course. Certification through the AHA is valid for two years. Certification through the Red Cross is valid for one year. Team members shall maintain their certification at the intervals required by the AHA or the American Red Cross. When State training requirements differ from NASA recommendations, the more stringent requirements apply.

On line drills are conducted to provide team members with practice using the established emergency procedures and evaluating their response. The OHC is responsible for evaluating drills, emergency usage and implementing improvements to the emergency process and protocols as part of the on-going quality assurance program.

AED Requirements

AED's must be located or utilized in areas with high population density and in work areas with potential risk of sudden cardiac death. The AED's should be placed in a readily accessible and secure location. The written AED process and protocols, operator's manual and supplies should be placed with the AED unit. After every emergency response, equipment should be replaced in its designated location, supplies restocked and a written checklist completed.

AED's must be checked weekly to ensure they are in their designated location along with supplies and the Center's plan. This is merely a cursory check to ensure that the batteries are functional. A more thorough monthly check is to be placed with each unit and constitutes the actions taken during the monthly checks. A written checklist should be signed and dated weekly, following the inspection by the OHC or a designated representative. Other equipment checks recommended by the AED manufacturer must also be documented in the same manner. Written records of any routine or emergency maintenance of AED's must be maintained for 2 years. The Center Medical Director must be notified immediately if any problems are encountered.

The actual AED locations are not contained within this document, but will however be published separately as AED locations may change and new AED locations will be added as more units are purchased.

RECORDS

All records related to this program will be maintained by the Medical Services contractor in accordance with BMS requirements. These include:

1. Training Documentation

- a. Organizational Development and Training Office (Civil Service Personnel)
- b. Employee's Management (Contractor Personnel)
- c. OHB copies of all training records

2. Equipment Records

- a. Procurement Records
- b. Maintenance Records
- c. Usage Reports

Written documentation must be completed immediately following each response involving the use of the AED. The GRC Medical Director must be notified verbally immediately following an incident and should receive the written documentation prior to the close of business on the day of the incident, but no later than the beginning of the next business day. The GRC Medical Director must retain the original written response and send a copy to the OHB Chief. The GRC Medical Director is also responsible for notifying the OHC verbally and forwarding written documentation including case outcome within one business day of the emergency response.

All documentation on training, maintenance procedures and drills must be retained for five years. Documentation of emergency responses must be retained indefinitely. The Medical Services contractor must maintain written records of training for team members and drills that are conducted. Written documentation must also be maintained daily,

REFERENCES

- NPD 1800.2A, "NASA Occupational Health Program."
- NPD 1820.1, "NASA Environmental Health Program."
- NPR 8621.1, "NASA Procedural Requirements for Mishap Reporting, Investigating, and Recordkeeping."
- NPD 8700.1, "NASA Policy for Safety and Mission Success."
- NPD 8710.1, "Emergency Preparedness Program."
- NPR 1800.1, "NASA Occupational Health Program Procedures."
- NPR 8715.1, "NASA Safety and Health Handbook Occupational Safety and Health Programs."
- NPR 8715.3, "NASA Safety Manual."
- Ohio Revised Code (ORC) 5101.02
- ORC 2305.23
- ORC 2305.23.5
- Medtronic Lifepak CPR Plus Manual, Medtronic Emergency Response Systems
- American Red Cross First Aid/CPR/AED Program Training Guide
- Federal Cardiac Arrest Survival Act (CASA)

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